

Oregon Department of Transportation Environmental Cost Study For Fiscal Years 2013 and 2014

Introduction

ORS 184.666 directs the Oregon Department of Transportation to report on how environmental mandates affect costs for maintenance, preservation and modernization to the extent they can be determined.

This report summarizes the cost of environmental compliance for fiscal years 2013 and 2014. Federal, state, and local mandates, laws, regulations, and ordinances affect the planning, project development, construction, and maintenance of transportation projects. ODOT estimates the cost to comply with these environmental regulations to be \$81.8 million or 3.41 percent of its \$2.4 billion budget for the Highway Division for fiscal years 2013 and 2014.

Discussion

Maintenance, preservation, and modernization are three primary categories of ODOT's work. ODOT has documented environmental costs by four main categories: Planning, Project Development, Construction, and Maintenance. These represent the four main categories of a project, from inception to construction to maintaining.

Planning

ODOT develops environmental inventories and system analyses to guide local Transportation System Plans and state facility plans, including interchange and road segment plans. Requirements for an environmental assessments or environmental impact statements under the National Environmental Policy Act (NEPA) are implemented during the planning stage of transportation projects. Because so many of ODOT's projects include some federal funds, ODOT's practice to apply the NEPA process to actions that have the potential to significantly impact the human environment. Planning staff are also responsible for ensuring transportation plans and projects comply with Oregon's land use rules and goals. This requires close coordination with local governments and the Department of Land Conservation and Development to develop consistency findings for transportation plans. Planning makes up 2.75 percent of the total ODOT spent on environmental expenditures

Project Development

When developing a transportation project, ODOT staff takes into consideration issues such as noise impacts, erosion control, streambed conditions, water quality, and incidental take of endangered species, particularly fish species. These are issues often requiring a permit from a regulatory agency prior to construction. The NEPA process plays a primary role in highway project development, particularly for large projects.

Project development environmental costs include:

- In-depth studies of environmental resources and concerns
- Stakeholder involvement in identifying solutions
- State, federal, natural, and cultural resource agency coordination and permitting
- Engineering design focused on environmental compliance
- Right-of-way (ROW) purchase for environmental mitigation

Project Development makes up 25.56 percent of the total ODOT spent on environmental expenditures. During the project development phase, environmental staff are responsible for planning and conducting studies to assess the environmental effects of construction projects, securing regulatory agency permits, developing mitigation proposals and working to develop streamlined permitting approaches for transportation projects. Work includes, but is not limited to, all aspects of compliance with the following laws and regulations: Clean Water Act, Endangered Species Act, Historic Preservation Act, Magnuson-Stevens Act, Migratory Bird Treaty Act, State fish passage statute, State fill/removal law, NEPA, Section 4(f) of U.S. DOT Act (1969).

Construction

Ensuring noise, erosion control, streambed conditions, water quality and incidental take of endangered species, particularly fish species, are managed according to regulatory permits is a significant issue during construction. Highway construction represents 10.61 percent of the total spent on ODOT's environmental costs. Funds allowed for bridge program environmental oversight and compliance activities, including construction site inspections, contractor and resource agency coordination and mitigation monitoring and reporting. Environmental employees are assigned to projects to focus on environmental compliance. Construction activities include: fish passage, 404 and DSL permit condition evaluation, cultural resources protection, erosion and sediment control, local government permit compliance, Migratory Bird Treaty Act compliance, Endangered Species Act compliance, and Clean Water Act compliance.

Maintenance

The maintenance program provides expertise in forestry, vegetation management, utility permits, emergency management, field services, training, clean water, salmon recovery, and managing solid waste and hazardous materials, all guided by state and federal environmental laws. In performing these actions, ODOT's Office of Maintenance is responsible for:

- Complying with permit conditions
- Minimizing impacts to water quality
- Minimizing impacts to threatened and endangered species
- Ensuring permits are obtained when needed, especially on or near ODOT's right of way and easements

Highway maintenance represents 61.07 percent of the total spent on ODOT's environmental costs. Funds are expended for environmental employee time to develop training and work with maintenance staff to assure their routine work and projects are in compliance with ODOT's Routine Road Maintenance Water Quality and Habitat Guide: Best Management Practices. Permits are secured when necessary for maintenance actions. These actions may include environmental mitigation for protected resources.

Limitations of the Data

There is considerable overlap between, within environmental disciplines, and between the state, federal and local mandates with which ODOT must comply. This study estimates those environmental compliance costs in total.

Costs of personnel engaged in environmental compliance were based on an estimate of the percentage of time spent on environmental mandates. For example, in design work, the response to environmental mandates is spread over the entire effort.

This analysis identifies direct costs that can be reasonably attributed to environmental mandates. Indirect costs, such as the cost of providing a small bridge rather than a culvert to enable fish passage, and cost savings calculations due to avoidance of impacts to resources, are not included because they are subjective and the agency does not track them systematically.

The following costs have not been included:

- Occupational environmental safety issues such as use of protective clothing while using hazardous material
- Laws surrounding right-of-way acquisition
- The overall cost of planning (if an environmental document is developed in conjunction with planning, the cost of that effort is included)
- Expenditures for Congestion Management Air Quality (CMAQ) projects and for Scenic Byways, because these are grants for a specific purpose, not mandates

Cost Assumptions

ODOT purchases property to mitigate for noise, wetlands, or biological impacts and for impacts to park properties. Actual costs are reported for property acquisition for mitigation; costs for compliance staff are estimated.

Environmental costs for highway construction are calculated awarded bids. Expenditures are documented in the year contracts are awarded, not the year a project is constructed.

Due to annual fluctuations in weather, maintenance activities can vary from year to year. Some environmental maintenance costs can be captured as true costs; however, some costs are estimates as the environmental component is imbedded in other activities. Funds for emergency services were actually spent in the previous

year and then reimbursed. For example, reimbursement funds received in FY 2013 and FY 2014 were for expenses incurred in FY 2010 and FY 2011.

Conclusion

In FY 2013 and 2014, ODOT's direct costs for environmental work total 3.41 percent of the Highway Division budget. Maintenance activities accounted for more than half of environmental expenditures for FY 2011 and FY 2012. Of the \$81.8 million spent during FY 2013 and 2014, ODOT estimates the following costs associated with each phase of projects:

- Planning: 2.75 percent
- Project Development: 25.56 percent
- Construction: 10.61 percent
- Maintenance: 61.07 percent

Implementation of the State Transportation Improvement Plan (STIP) inherently results in fluctuations from year to year, as projects move through the project delivery cycle from design and permitting, to construction and then post- construction implementation, and maintenance.

The total highway program costs vary from year to year as does the relative proportion of the type of work performed. Some years there is more design and permitting work and others relatively more construction work. Design and permitting work tends to have greater costs for environmental compliance than construction, though this is not always the case.

ODOT continues to take steps to streamline the environmental compliance process. The Highway Division has increased its use of programmatic permitting, development of the regulatory liaison program, and implementation of the OTIA III State Bridge Delivery Program's streamlined environmental process. These improvements have been offset, at least in part, by increased regulatory pressures particularly related to water quality, endangered species (salmon in particular), and fish passage requirements.

The Jobs and Transportation Act (JTA), a transportation funding plan adopted by the 2009 Legislature (HB 2001), addresses important elements of Oregon's transportation system and economy. Because of the JTA, ODOT has adopted administrative rules to incorporate environmental performance standards into highway construction projects and to improve the environmental permitting process. ODOT will continue to strive for improvements in its environmental stewardship and permit streamlining efforts.